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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,671	02/11/2000	Masakazu Suzuki	SCEI 3.0-004	5510

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EXAMINER

COLEMAN, ERIC

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 07/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/502,671

Applicant(s)

SUZUOKI ET AL.

Examiner

Eric Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-40 is/are allowed.
- 6) ☒ Claim(s) 41 and 43 is/are rejected.
- 7) ☐ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morioka (patent No. 5,995,111).

3. Morioka taught the invention substantially as claimed including a data processing ("DP") system comprising:

a) Means and method for performing calculations by a first processor (CPU 1) wherein the first calculations comprised calculations for complex modeling of objects for graphical display (e.g., see fig. 2, and col. 4, lines 42-56);

b) Means and method for performing second calculations to be calculated by a second processor (32,34), wherein the second calculations comprised calculations for simple geometrical transformations of objects for graphical display (e.g., see fig. 2, and see col., 4, line 53-col. 5, line 13).

4. Morioka did not expressly detail (claim 41) that the first processor and the second processor performed the respective calculations simultaneously. Morioka however taught The CPU performed a simulation or a game and performed calculations and sent data to the second processor to perform geometrical transformations (e.g., see fig.2 and

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col. 4, lines 42-56). Morioka also taught that processes of the second processors were performed polygon by polygon in synchronism with a clock in the system.

A video game that is performed continuously in real-time would have provided a more realistic and enjoyable game for the user. One of ordinary skill would have been motivated to simultaneously perform the CPU processes and second processor processes as this would have enabled the game to be run in real-time and provide a more enjoyable and realistic game.

5. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen (patent No. 5,319,606) in view of Leung (patent No. 5,900,887).

6. Bowen taught the invention substantially as claimed including a data processing ("DP") system comprising:

a) Graphic rendering engine (e.g., see col. 2, lines 60-68);

b) Local memory including a frame memory (e.g., see col. 1, lines 14-57, and fig.3, and col. 5, lines 15-45).

7. Bowen did not expressly detail (claim 43) the rendering engine comprising logic for filling the frame buffer with a rectangle of at least 16 pixels per clock. Leung however taught this limitation (e.g., see col. 6, lines 15-47 and col. 7, lines 14-35, and col. 8, line 45-col. 9, line 31).

8. It would have been obvious to one of ordinary skill in the art to combine the teachings of Bowen and Leung, Leung taught that the Bowen reference was an example of the prior art block write mode (e.g., see col. 1, lines 44-49 of Leung) and the Leung system related to video memories with block write operations (e.g., see col. 1,

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lines 8-10 of Leung). Therefore one of ordinary skill would have been motivated to combine the teachings of Bowen and Leung especially for such as elements such as the frame buffer that was not fully described in the Leung reference.

Allowable Subject Matter

9. Claims 1-40 are allowed.

10. Claim 42 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rosenberg (patent No. 6,366,272) disclosed a DP system providing interactions between simulated objects using force feedback (e.g., see abstract).

Morozumi (patent No. 6,570,571) disclosed an image processing system for efficient distribution of image processing to plurality of graphics processors (e.g., see abstract).

Johns (patent No. 5,724,560) disclosed a display graphic adapter for processing different pixel sizes in a windowing system (e.g., see abstract).

Futatsugi (patent No. 6,259,431) disclosed an image processor, game machine, image display method and recording medium (e.g., see abstract).

Vainsencher (patent No. 5,977,997) disclosed a single chip computer having integrated MPEG and graphical processors (e.g., see fig. 2 and abstract).

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Kondo (patent No. 6,485,369) disclosed a video game system outputting image and music and storage medium used therefor (e.g., see abstract).

Bersack (patent No. 5,136,6⁶~~24~~^{EC}) disclosed a system for pixel rendering (e.g., see abstract and fig. 3).

Denneau (patent No. 6,384,833) disclosed a system for parallelizing geometric processing in a graphics rendering pipeline (e.g., see abstract and fig.2).

Alexander (patent No. 5,467,459) disclosed a imaging a processing system (e.g., see abstract and fig. 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Coleman whose telephone number is (703) 305-9674. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.



ERIC COLEMAN
PRIMARY EXAMINER

EC
June 9, 2003